



Omaha Public Power District

Carbon Intensity

Frequently Asked Questions

1. What is carbon intensity?

Carbon intensity is the carbon dioxide emissions from our operations divided by our net generation (all CO₂ emissions/all OPPD net generation = carbon intensity). OPPD's net generation includes coal, wind, hydropower, natural gas, landfill gas, peaking stations and oil. Carbon intensity measures the pounds of carbon per megawatt-hour of energy produced.

2. What does carbon intensity measure?

It is the rate of carbon produced so that customers may calculate their carbon footprint based on their electricity use. See the following question for an example of how it works.

3. How can I calculate my carbon footprint of energy consumed?

In other words, how do my energy-efficiency efforts relate to overall carbon emissions and my carbon footprint?

For example, let's say you use 1,000 kilowatt-hours (kwh), which is the usage of a typical household. Your carbon footprint from your electricity used, based on OPPD's carbon intensity, would be 1,000 kwh x 1/1,000 megawatt (mwh) hours/kwh hour x 1,554 pounds/mwh = 1,554 pounds of carbon per month.

Let's say you go to the store and purchase LED light bulbs to replace your old incandescent light bulbs. The following month, you see that your electricity usage drops to 900 kwh. Using the example above, the carbon intensity of your household now equals 900 kwh x 1/1,000 mwh/kwh x 1,554 pounds/mwh = 1,398.6 pounds of carbon per month. Not only will your electric bill be lower because of your reduced electricity usage, but your reduced usage will also equate to a reduction of 155 pounds of carbon emitted each month going forward.

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4. Why is OPPD considering using this metric?

The carbon intensity metric is reflective of OPPD's entire fleet of operations and not just the renewable load. It also includes all renewables OPPD uses, not just wind generation. Since 2013, OPPD has provided this information to large customers upon their request, allowing them to measure their overall carbon footprint to help them meet their environmental stewardship goals.

5. What is OPPD's goal?

OPPD's goal would be 20 percent below the 2010 carbon intensity number, or 1,171 carbon pounds per megawatt-hour (mwh). OPPD is currently at about 1,554 pounds per mwh.

6. How does OPPD plan to achieve that goal?

OPPD will achieve that goal through resource planning and continuous monitoring of our generation sources—and anticipating our generation needs as the energy environment changes. OPPD will continue to look at our non-carbon generation options and maintain a flexible and agile generation plan.

7. What metric was previously used/reported?

Prior to measuring carbon intensity, OPPD has measured the amount of retail energy sales supplied from renewable energy resources. The current goal as listed in SD-7 Environmental Stewardship is to have at least 30 percent of retail energy sales coming from renewable sources.

8. How does carbon intensity differ from emissions tonnage?

Emissions tonnage is the total amount of emissions produced in a year. It doesn't reflect the production associated with the emissions. Carbon intensity is the ratio of carbon dioxide emissions divided by electricity generation, which gives an indication of how the emissions relate to the production of electricity.

9. Who asks for this information and why?

Typically, OPPD's largest customers, such as Fortune 500 companies, ask for carbon intensity numbers. Often, those companies have environmental stewardship goals they must meet, and this information can help them determine and reduce their carbon footprint.

10. Is OPPD's carbon intensity information available to the public?

Yes. This information is available upon request and is based on information OPPD reports to the Environmental Protection Agency. It is not a regulatory reporting item.

11. Why was a directional goal around renewables added to proposed changes for this strategic directive?

As part of October's Board of Directors committee meetings, directors continued their discussion about a new renewables target not previously included in the draft posted for review. In light of this addition, the updated strategic directive draft will be reopened for comments through Sunday, Nov. 4, 2018. The proposed change states that OPPD shall "strive toward a long-term goal of at least 50 percent of retail energy sales supplied from renewable energy sources."